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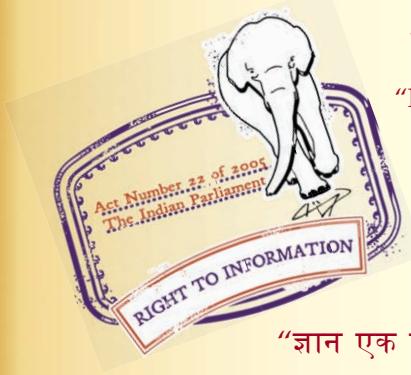
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IS 9044 (1979): Method of Measuring Thickness of Mica Blocks, Thins, Films and Splittings [ETD 2: Solid Electrical Insulating Materials and Insulation Systems]

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Indian Standard

METHOD OF MEASURING THICKNESS
OF MICA BLOCKS, THINS, FILMS
AND SPLITTINGS

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METHOD OF MEASURING THICKNESS OF MICA BLOCKS, THINS, FILMS AND SPLITTINGS

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Indian Standard

METHOD OF MEASURING THICKNESS OF MICA BLOCKS, THINS, FILMS AND SPLITTINGS

0. F O R E W O R D

0.1 This Indian Standard was adopted by the Indian Standards Institution on 12 January 1979, after the draft finalized by the Mica Sectional Committee had been approved by the Electrotechnical Division Council.

0.2 This Indian Standard prescribes the method of measuring the thickness of mica in the form of blocks, thins, films and splittings. While this standard specifies use of dial type micrometer for measuring the thickness of mica and the method of its calibration, it is not intended to exclude use of measuring equipment. Or methods of calibration, such as electronic gauges and light beam gauges, which could give comparable or better results. It is intended to incorporate standard techniques of 'fast gauging' as is now increasingly in vogue, at a later stage when sufficient information is available.

0.3 While preparing this standard, assistance has been derived from ISO 5972-1978 'Mica blocks, thins, films and splittings — Measurement of thickness', issued by the International Organization for Standardization.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the method of measuring thickness of mica in the form of blocks, thins, films and splittings.

*Rules for rounding off numerical values (revised).

2. METHOD OF MEASUREMENT

2.1 Apparatus

2.1.1 The apparatus required (*see also 0.2*) shall be a constant-force micrometer of dial type with circular plunger of 6 mm diameter. It shall be capable of exerting a pressure of 10^5 Pa during the measurement.

2.1.2 The measuring error of the micrometer shall not exceed 0.005 mm. However, for measuring the thickness of a single splitting, the apparatus used shall have a better accuracy.

NOTE 1 — The accuracy of the micrometer shall be checked with a set of slip gauges.

NOTE 2 — It is permissible to use a micrometer with ratchet having a plunger of 6 mm diameter. However, in case of a dispute, micrometer as specified in 2.1 shall be used.

3. PROCEDURE

3.1 One measurement of thickness for every 10 cm^2 of the surface of the sample shall be carried out. For surfaces less than or equal to 10 cm^2 , a single measurement is considered adequate.

4. EXPRESSION OF RESULTS

4.1 The arithmetic mean of the measurements carried out as specified in 3 shall be taken as the thickness of the sample.